Solid Waste Advisory Committee Meeting Summary
April 26, 2007

MassDEP Updates

- **Asbestos in Soil Amendments:** Sarah Weinstein, MassDEP, announced that MassDEP has published for public comment draft regulations and policies for managing asbestos that has been released into the environment. The draft proposes criteria for reporting these releases to MassDEP under MGL c. 21E and the Massachusetts Contingency Plan, and would also expand the current exemptions from "Special Waste" classification soil that is minimally contaminated with asbestos. The package also proposes to amend MassDEP's policy governing re-use of contaminated soil at landfills, by allowing soil contaminated with asbestos to be used for alternative daily cover and for grading/shaping material, as long as the contamination levels are below specific concentrations. Public hearings will be held during the weeks of May 7 and May 14, and MassDEP must receive any written comments by 5 pm on June 1, 2007. A copy of the public hearing notice and the proposed regulations and policies is available from MassDEP's web site: http://www.mass.gov/dep/public/publiche.htm#ais. For questions please contact Sarah Weinstein at (617) 574-6862 or at sarah.weinstein@state.ma.us.

- **Hauler Subcommittee:** Greg Cooper, MassDEP, gave an update on the Hauler Subcommittee formed at the January SWAC meeting to provide inputs on ways that haulers and generators can help increase recycling levels and waste ban compliance. The Hauler Subcommittee held its first meeting in February, and nine haulers, plus several municipal representatives and consultants, attended. Initially, haulers were reluctant to take a role in waste ban compliance because they want to be seen by their customers as service providers, not enforcers. However, haulers have since reported back on various in-house implementation steps they have taken, such as driver training and communications to sales departments, to prompt more recycling by customers. The Hauler Subcommittee will meet again in the next few months, once Consumer Programs has staffing in place to fully support the effort.

- **Mercury in Products Regulations Update:** Lori Segall, MassDEP, gave a presentation on the Massachusetts Mercury Management Act Phase One Regulations. She handed out a summary of provisions for recovery and recycling of vehicle switches and other mercury-added products; exempted products; and proposed capture rates for targeted products. This document is posted along with these meeting notes. Lori also announced hearings around the state on the proposed regulations during the week of April 30 to May 4, 2007.

  Greg Cooper, MassDEP, went on to explain that the Mercury Act provides for disposal bans on mercury-containing products effective May 1, 2008. The wording of the statute places responsibility on haulers and generators for compliance with bans, and does not specifically mention disposal facilities. Manufacturers of many mercury-added products who sell in Massachusetts must set up collection programs for their end-of-life products. However, fluorescent lamp manufacturers are not subject to this requirement. Instead, they need to meet increasing recycling targets for spent lamps or they pay into a fund that DEP will manage for municipal recycling programs, starting in 2009. Even in the case that recycling targets are not met, there will be at least a year after the disposal ban takes effect before any funding becomes available to municipalities.

  Municipal representatives asked how MassDEP will help municipalities cope with the increasing amounts of mercury products that will be banned from disposal as of May 1, 2008, before some

industry-funded programs have been established. Greg replied that MassDEP wants to address this by organizing a Mercury Products Workgroup to look into funding issues, how to best develop collection infrastructure options, and roles and responsibilities for expanding collection systems. Recommendations from this Workgroup will be utilized in drafting Phase Two of the mercury product regulations.

Greg noted that some existing take-back programs, such as the Thermostat Recycling Corporation (TRC), have already expanded their services to create more collection options for municipalities. TRC originally accepted mercury thermostats only from building material distributors patronized by building contractors. TRC now accepts mail-back thermostats replaced by Do-It-Yourself re-modelers, and accepts thermostats from municipalities. For municipalities to utilize TRC programs, there is a one-time $25 registration fee.

The Mercury Products Workgroup will be led by Tina Klein, MassDEP, and will meet 2 or 3 times between now and the next Solid Waste Advisory Committee meeting on June 28, 2007. Greg introduced Tina Klein to the SWAC members, and a Workgroup sign-up sheet was circulated at the meeting, and by way of a follow-up email to the entire SWAC email list. The Workgroup will report back at the next SWAC meeting.

For questions on the Mercury Management Act, please contact Lori Segall at (617) 654-6595 or via email at lori.segall@state.ma.us. If you are interested in this Workgroup, please contact Tina Klein at (617) 292-5704 or via email at tina.klein@state.ma.us.

- **Inactive Landfill Closure Policy:** John Fischer, standing in for Jamie Doucett of MassDEP, gave a brief update on the addendum being developed for the Inactive Landfill Closure Policy. The addendum addresses the use of construction and demolition debris (C&D) materials for grading and shaping in landfill closure projects. John reported that the addendum has been circulated for public comments and MassDEP did not receive any comments. MassDEP will look at new information on a hydrogen sulfate standard for this application, and may incorporate this before issuing the addendum sometime in May.

  Jan Ameen, Franklin County Solid Waste Management District, expressed concerns about the proposed addendum because it does not address other contaminants found in processor tests of C&D fines as reported in 2004, 2005, and 2006. Jan passed out a summary of test results that she had prepared, noting that certain arsenic, lead, TPH, VOCs, and SVOCs levels exceed levels that would fail MassDEP contaminated soil policy standards. This is a particular concern because C&D fines are being used in closure of unlined landfills that could be used for things like soccer fields soon afterwards. Jan acknowledged that H_2S is a problem, but suggested that these other contaminants in fines and residuals are a more serious problem. John Fischer stated that he would forward her handouts and concerns to Jamie Doucett and other appropriate MassDEP staff for consideration.

- **SEMASS Status Report:** Matt Wetmore, Covanta Energy Corporation, updated the group on the status of the SEMASS facility following the fire on March 31, 2007. This fire was caused by an explosion in one of the shredders used to pre-process refuse before conveyance to the boilers. The exact item that caused the explosion is unknown, but the fire spread to the tipping floor and nearby refuse staging areas.

  Fortunately, SEMASS maintains an internal Emergency Response Team and a skilled workforce that is well drilled in firefighting, safety, and boiler emergency shutdown procedures. Plant personnel were able to close off the three boilers almost immediately, thereby reducing damage to the power

side of the plant operations. Boilers #3 and #2 were brought back online on April 17 and 20, respectively. The third and last unit, Boiler #1 will be brought online by May 9th.

Matt said Covanta received excellent assistance and guidance from MassDEP in quickly arranging temporary approvals to bypass waste to other facilities, and in monitoring air quality and water run-off during and after the fire. MassDEP found no imminent air pollution hazards, contrary to some inaccurate media reports. SEMASS is very thankful for the assistance provided by the MassDEP, the EPA, and the 33 municipal fire departments that responded to the fire. The best news to come out of the response is that there were no serious injuries. That is definitely something to be happy about!

- **2005 Solid Waste & Waste Reduction Data:** John Fischer, MassDEP, gave a presentation on the 2005 draft solid waste and waste reduction data. One finding is that recycling and diversion levels remained essentially flat from 2004 to 2005. Further analysis is being considered to better understand the basis for this trend, in particular with regard to municipal recycling, which MassDEP expected might increase. The draft 2005 Solid Waste Data is posted along with these meeting notes. For more information, please contact Alissa Bilfield at (617) 574-6820 or at alissa.bilfield@state.ma.us.

- **Avian Flu Debris Management Plan:** John Fischer, MassDEP, presented an overview of the Draft Avian Flu Debris Management Plan. The draft plan addresses management of bird carcasses and associated materials in the event of an avian flu outbreak in MA. The presentation is posted on the MassDEP web site at http://www.mass.gov/dep/service/outreach/mhoapres.htm. For questions on this plan, please contact Julia Wolfe at (617) 292-5987 or at julia.wolfe@state.ma.us.

Next SWAC Meeting

The next SWAC Meeting is scheduled for Thursday, June 28, 2007, from 1:00 p.m. to 3:00 p.m. at MassDEP, One Winter Street, in Boston.

Massachusetts Mercury Management Act
Phase One Regulation Summary

310 CMR 74.00 Removal and recycling of mercury-added components in vehicles

- All mercury-added components must be removed from an end-of-life vehicle before it is crushed
- Vehicle recyclers must certify that all mercury-added vehicle *switches* have been removed before selling vehicle bodies to scrap recycling facilities
- No mercury switches may be sold for use in vehicles unless no alternative exists
- Vehicle manufacturers must set up a program for collection and recycling of mercury-added vehicle *switches*
- Vehicle manufacturers must pay $3/switch, if, after the first year of a no-payment program, less that 50% of available switches have been collected.
  (Manufacturers estimate 92,500 switches available in Massachusetts, to date 322 have been collected)
- *MassDEP will use the Environmental Results Program (ERP) model where businesses will certify that they comply with the law and DEP will perform inspections.*

310 CMR 75.00 Collection and Recycling of Mercury-Added Products

- Any manufacturer who sells mercury-added products in Massachusetts on or after May 1, 2007 must set up a collection and recycling program that is convenient and accessible to product purchasers and users and be financially responsible for the program. (*A number of products are exempt from this requirement, including mercury-added lamps, see reverse side)*
- Manufacturers must submit to MassDEP a detailed plan for their program that will meet target capture rates for their products that will increase over a few years. *(see rates on reverse side)*
- Mercury-added lamp manufacturers must develop an education plan that explains that mercury can harm the environment and human health and how to return, recycle, or properly dispose of mercury added lamps.
- Lamp recycling rates in Massachusetts must increase to:
  30 percent by December 2008,
  40 percent by December 2009,
  50 percent by December 2010, and
  70 percent by December 2011 and each year thereafter
  (Current recycling rates are estimated at 20-25%)
- If recycling efforts do not meet these targets, the law requires lamp manufacturers to provide up to $1 million per year to MassDEP for grants to municipalities and/or regional authorities that are collecting and recycling mercury-containing lamps.
- *DEP will use Environmental Results Program (ERP) model where businesses will certify that they comply with the law and DEP will perform inspections.*

Products exempt from collection plan requirements

(a) motor vehicles and motor vehicle components,
(b) refurbished medical equipment,
(c) mercury-added button cell batteries,
(d) products where the only mercury contained in the product comes from a removable mercury-added button cell battery,

(e) products where the only mercury contained in the product is contained in one or more mercury-added lamps, except as provided in 310 CMR 75.05,
(f) mercury-added formulated products intended to be totally consumed in use, such as reagents, cosmetics, pharmaceuticals and other laboratory chemicals.
(g) Products made with coal ash,
(h) Products that are incorporated into equipment used to manufacture semi-conductor devices, or
(i) elemental mercury in pre-capsulated form that is sold, distributed or provided to a dental practitioner for use in compliance with the department's regulations concerning amalgam wastewater and recycling for dental facilities.

Proposed target capture rates for collection plans

TABLE 1 Target Capture Rates for Recycling Mercury-added Products Generated in Massachusetts	
Calendar Year	Target Capture Rate
2008	30 percent
2009	40 percent
2010	50 percent
2011	70 percent
Each subsequent year	70 percent

You can review complete regulation package and public hearing schedule at:

http://www.mass.gov/dep/toxics/stypes/hgres.htm

2005 Solid Waste & Waste Reduction Data

Waste Reduction Rates Based on *Potential* Generation			
	2004	**2005**	**2010 Milestone**
Total Waste Reduction Rate	60%	60%	70%
MSW Waste Reduction Rate	45%	44%	60%
Non-MSW Waste Reduction Rate	88%	87%	88%

Recycling Rates Based on Actual Generation		
	2004	**2005**
Overall Recycling	48%	48%
MSW Recycling	35%	36%
C&D Recycling	71%	71%

Tonnage and Percent Change Summary: 2004-2005						
			2004	**2005**	**Tons Change**	**% Change**
Potential Generation			**15,990,000**	**16,090,000**	**100,000**	**0.6%**
	MSW		10,280,000	10,350,000	70,000	0.7%
	Non-MSW		5,710,000	5,750,000	40,000	0.7%
Source Reduction			**2,050,000**	**1,950,000**	**(100,000)**	**-4.9%**
	MSW		1,550,000	1,260,000	(290,000)	-18.7%
	Non-MSW		500,000	690,000	190,000	38.0%
Total Generation			**13,930,000**	**14,140,000**	**210,000**	**1.5%**
MSW			8,720,000	9,090,000	370,000	4.2%
		Residential	3,510,000	3,510,000	-	0.0%
		Commercial	5,210,000	5,570,000	360,000	6.9%
Non-MSW			5,210,000	5,050,000	(160,000)	-3.1%
		C&D	5,160,000	4,970,000	(190,000)	-3.7%
		Other	50,000	90,000	40,000	80.0%
Diversion			**7,580,000**	**7,620,000**	**40,000**	**0.5%**
MSW			3,070,000	3,300,000	230,000	7.5%
		Residential Recycling	540,000	530,000	(10,000)	-1.9%
		Commercial Recycling	1,880,000	2,010,000	130,000	6.9%
		Residential Off Site Composting	340,000	350,000	10,000	2.9%
		Commercial Composting	310,000	410,000	100,000	32.3%
Non-MSW			4,500,000	4,320,000	(180,000)	-4.0%
		C&D	3,650,000	3,520,000	(130,000)	-3.6%
		Other C&D Diversion	860,000	800,000	(60,000)	-7.0%
Disposal			**6,360,000**	**6,520,000**	**160,000**	**2.5%**
	Landfill		1,720,000	2,070,000	350,000	20.3%
		MSW	1,430,000	1,760,000	330,000	23.1%
		C&D	270,000	240,000	(30,000)	-11.1%
		Other	30,000	70,000	40,000	133.3%
	Combustion		3,080,000	3,090,000	10,000	0.3%
		MSW	3,070,000	3,080,000	10,000	0.3%
		Non-MSW	10,000	10,000	-	
	Net Exports		1,560,000	1,350,000	(210,000)	-13.5%
		Exports	1,840,000	1,600,000	(240,000)	-13.0%
		Imports	280,000	250,000	(30,000)	-10.7%

C&D Management by Tonnage 2003 - 2005			
	2003	**2004**	**2005**
Generated	**4,720,000**	**5,290,000**	**4,970,000**
Disposed	**720,000**	**660,000**	**650,000**
• **In-State**	370,000	270,000	240,000
• **Out-of-State**	350,000	390,000	400,000
Diverted	**3,990,000**	**4,640,000**	**4,320,000**
• **Recycled**	**3,360,000**	**3,770,000**	**3,520,000**
o ***Asphalt, Brick, and Concrete (ABC)***	3,200,000	3,470,000	3,330,000
o ***Metal***	80,000	100,000	90,000
o ***Wood for Non-fuel Uses***	20,000	30,000	30,000
o ***Wood Waste***	40,000	50,000	50,000
o ***Other****	20,000	20,000	20,000
• **C&D Other Diversion**	**630,000**	**860,000**	**800,000**
o **C&D Fines/Residuals**	540,000	810,000	750,000
o **C&D Wood for Fuel**	90,000	50,000	60,000

*Other materials include ceiling tiles, carpet, gypsum wallboard, and asphalt roofing shingles.

Tons of MSW Exported by State: 2003-2005			
	2003	**2004**	**2005**
CT	39,088	39,060	38,236
ME	222,957	230,686	238,415
NH	301,022	186,000	64,506
NY	193,817	277,716	224,456
OH	120,450	130,284	85,092
PA	5,039	3,695	4,045
RI	5,984	6,223	6,304
SC	446,351	492,295	479,496
VA	12,107	3,696	1,996
VT		4,195	4,195
Other Unknown	43		
TOTAL	**1,366,858**	**1,374,918**	**1,142,682**

Tons of MSW Import by State: 2003-2005			
	2003	**2004**	**2005**
CT	60,969	53,028	81,569
ME	9,066	20,787	11,697
NH	26,426	41,027	45,769
NY	77,530	73,473	7,979
RI	24,539	26,155	30,996
VT	4,627	5,475	18,905
TOTAL	**203,157**	**219,945**	**196,915**

C&D Export by State: 2003-2005			
	2003	**2004**	**2005**
CT	5,404	1,117	2,179
ME	148,317	137,751	148,691
NH	14,410	11,713	4,287
NY	19,591	17,965	14,860
OH	180,702	240,484	257,510
PA		1,912	
RI	4,046	1,024	14,409
SC	31,933	32,403	
VA	10,440		
VT	26		
TOTAL	**414,869**	**444,369**	**441,936**

C&D Import by State: 2003-2005			
	2003	**2004**	**2005**
CT	54,473	36,869	40,171
ME	983		
NH	2,414	10,205	6,763
NY	6,579	7,676	7,979
RI	34	626	1,158
VT			247
TOTAL	**64,483**	**55,656**	**56,381**

Projected Landfill Capacity (Tons Per Year)

Town	2005 Permitted Capacity	End of current permit	Lifetime of LF	2006	2007	2008	2009	2010	2011	2012	2013
Active Landfills											
Barre	93600	2007	**2013**	93600	93600	93600	93600	93600	93600	93600	93600
Bourne	219000	2011	**2024**	219000	219000	219000	219000	219000	219000	219000	219000
Carver	97982	2013	**2013**	97982	97982	97982	97982	97982	97982	97982	97982
Chicopee	365000	2011	**2012**	365000	365000	365000	365000	365000	365000	365000	0
Dartmouth	132600	2012	**2028**	132600	132600	132600	132600	132600	132600	132600	132600
Fall River	468000	2008	**2011**	468000	468000	468000	468000	468000	468000	0	0
Granby	235000	2008	**2011**	235000	235000	235000	235000	235000	235000	0	0
Hardwick	82800	2006	**2006**	82800	0	0	0	0	0	0	0
Middleborough	9620	2011	**2011**	9620	9620	9620	9620	9620	9620	0	0
Nantucket	26000	2007	**2017**	26000	26000	26000	26000	26000	26000	26000	26000
Northampton	50000	2007	**2007**	50000	50000	0	0	0	0	0	0
South Hadley	156000	2011	**2011**	156000	156000	156000	156000	156000	156000	0	0
Southbridge	180960	2019	**2019**	180960	180960	180960	180960	180960	180960	180960	180960
Sturbridge	410	2016	**2016**	410	410	410	410	410	410	410	410
Taunton	120120	2011	**2013**	120120	120120	120120	120120	120120	120120	120120	120120
Warren	2000	2012	**2012**	2000	2000	2000	2000	2000	2000	2000	0
Wayland	2345	2008	**2008**	2345	2345	2345	0	0	0	0	0
Westminster	296400	2007	**2025**	296400	296400	296400	296400	296400	296400	296400	296400

TOTAL PERMITTED CAPACITY	**2,444,725**	**1,871,092**	**1,295,972**	**1,060,972**	**1,060,972**	**841,972**	**311,352**	**309,352**
TOTAL POTENTIAL CAPACITY	**2,537,837**	**2,455,037**	**2,405,037**	**2,402,692**	**2,402,692**	**2,402,692**	**1,534,072**	**1,167,072**

KEY:

Permitted Capacity	Number without shading
Potential Additional Capacity	Number with shading

Waste Management Capacity Projections - 56% recycling in 2010

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total Generation	**14,140,081**	**14,422,882**	**14,711,340**	**15,005,567**	**15,305,678**	**15,611,792**	**15,924,028**	**16,242,508**	**16,567,358**
Baseline Recycling	**6,817,359**	**6,953,706**	**7,092,780**	**7,234,636**	**7,379,329**	**7,526,915**	**7,677,454**	**7,831,003**	**7,987,623**
Increased Recycling (to meet 56% goal)		**170,434**	**351,946**	**545,103**	**750,499**	**968,754**	**1,200,521**	**1,224,532**	**1,249,022**
Total Recycling (to meet 56% goal)	**6,817,359**	**7,124,140**	**7,444,726**	**7,779,739**	**8,129,827**	**8,495,670**	**8,877,975**	**9,055,534**	**9,236,645**
Increased Recycling Rate	**48.2%**	**49.4%**	**50.6%**	**51.8%**	**53.1%**	**54.4%**	**55.8%**	**55.8%**	**55.8%**
C&D Other Diversion	**803,529**	**763,353**	**725,185**	**688,926**	**654,479**	**621,755**	**590,668**	**561,134**	**533,078**
Combustion Capacity	**3,094,732**	**3,094,732**	**3,094,732**	**3,094,732**	**3,094,732**	**3,094,732**	**3,094,732**	**3,094,732**	**3,094,732**
Potential LF Capacity	**2,070,445**	**2,055,648**	**1,988,580**	**1,948,080**	**1,946,181**	**1,946,181**	**1,946,181**	**1,242,598**	**945,328**
Total In-state Capacity (baseline recycling)	**12,786,065**	**12,867,439**	**12,901,277**	**12,966,374**	**13,074,721**	**13,189,584**	**13,309,034**	**12,729,467**	**12,560,760**
Total In-state Capacity (total recycling)	**12,786,065**	**13,037,873**	**13,253,223**	**13,511,477**	**13,825,220**	**14,158,338**	**14,509,555**	**13,953,999**	**13,809,783**
Net Export (baseline recycling)	**1,354,016**	**1,555,444**	**1,810,063**	**2,039,193**	**2,230,957**	**2,422,208**	**2,614,993**	**3,513,041**	**4,006,598**
Net Export (total recycling)	**1,354,016**	**1,385,010**	**1,458,117**	**1,494,090**	**1,480,458**	**1,453,454**	**1,414,472**	**2,288,510**	**2,757,576**

Assumptions:

Generation Increase	2.0% (annual)
Baseline Recycling Tonnage Increase	2.0% (annual)
Total Recycling Tonnage Increase	4.5% (annual)
C&D Other Diversion Decrease	-5.0% (annual)

Combustion Capacity is projected to remain level from 2005 through 2013.

Landfill capacity is calculated to be 81% of total potential based on historical disposal patterns.

Net export is calculated by subtracting Total In-State Management Capacity from Total Generation.

Total In-State Management Capacity is the sum of Total Diversion, Combustion Capacity and Potential Landfill Capacity.